AMENDMENTS TO THE CLAIMS:

Without prejudice, this listing of the claims replaces all prior versions and listings of the claims in the present application:

Listing of the Claims:

1-12. (Canceled).

13. (Previously Presented) A method for effecting a computer-aided estimation of a mass of a vehicle, comprising:

computer-aided differentiating an equilibrium relationship, between a motive force and a sum of an inertial force and drive resistances, in which the mass and a gradient angle of a roadway are included as quantities, with respect to time, assuming a constant gradient angle; and

calculating at least one of (a) the mass of the vehicle and (b) a reciprocal value of the mass of the vehicle from the equilibrium relationship differentiated with respect to time in the differentiating step.

14. (Previously Presented) The method according to claim 13, wherein the vehicle includes a commercial vehicle.

15. (Previously Presented) The method according to claim 13, wherein the drive resistances include a sum of one of (a) an accelerative force and (b) a deceleration force as a function of the mass and one of (a) an uphill force and (b) a downhill force as a function of the gradient angle.

16. (Currently Amended) The method according to claim 15, wherein the mass is calculated from the equation:

$$m = \frac{dF/dt}{da/dt}$$, and

wherein [[a]] a represents a time derivation of a longitudinal vehicle velocity and [[F]] F represents the motive force of the vehicle.

17. (Currently Amended) The method according to claim 16, further comprising:

determining, from measured quantities, the motive force and the one of (a) the acceleration and (b) the deceleration.

18. (Previously Presented) The method according to claim 17, wherein the measured quantities are available in a control unit of the vehicle.

19. (Currently Amended) The method according to claim 18, further comprising:
filtering the measured quantities as a function of a signal quality.

20. (Previously Presented) The method according to claim 17, further comprising:
repeatedly measuring the measured quantities; and
weighting the measurements differently.

21. (Previously Presented) The method according to claim 13, wherein the computer-aided differentiating is performed continuously and recursively.

22. (Previously Presented) The method according to claim 21, wherein the computer-aided differentiating is performed one of (a) according to a two-point differentiation and (b) with a state-variable filter.

23. (Currently Amended) The method according to claim 13, the method further comprising:
forming a weighted average value, wherein the calculating step includes calculating both the mass and [[the]] a reciprocal value of the mass~~, the method further comprising forming a weighted average value~~.

24. (Previously Presented) A device for effecting a computer-aided estimation of a mass of a vehicle, comprising:
a calculation unit adapted to calculate at least one of (a) the mass of the vehicle and (b) a reciprocal value of the mass of the vehicle from an equilibrium relationship between a motive force and a sum of an inertial force and drive resistances, the mass and a gradient angle of a roadway included as calculation quantities, after a computer-aided differentiation of the equilibrium relationship with respect to time, assuming a constant gradient angle.

25. (Previously Presented) The device according to claim 24, wherein the vehicle includes a commercial vehicle.

26. (Currently Amended) The device according to claim 24, wherein the calculation unit is ~~integrating~~ integrated into a control unit of the vehicle.

27. (New) The device according to claim 24, wherein:

from measured quantities, the motive force and the one of (a) the acceleration and (b) the deceleration are determined,

the measured quantities are repeatedly measured, and the measurements are weighted differently,

the measured quantities are filtered as a function of a signal quality,

the drive resistances include a sum of one of (a) an accelerative force and (b) a deceleration force as a function of the mass and one of (a) an uphill force and (b) a downhill force as a function of the gradient angle, wherein the mass is calculated from the equation of $m = \frac{dF/dt}{da/dt}$, and a represents a time derivation of a longitudinal vehicle velocity and F represents the motive force of the vehicle, and

the measured quantities are available in a control unit of the vehicle.

28. (New) The device according to claim 24, wherein the computer-aided differentiating is performed continuously and recursively, wherein the computer-aided differentiating is performed one of (a) according to a two-point differentiation and (b) with a state-variable filter, and wherein the calculating includes calculating the mass and a reciprocal value of the mass.

29. (New) The method according to claim 13, further comprising:

determining, from measured quantities, the motive force and the one of (a) the acceleration and (b) the deceleration;

repeatedly measuring the measured quantities, and weighting the measurements differently; and

filtering the measured quantities as a function of a signal quality;

wherein the drive resistances include a sum of one of (a) an accelerative force and (b) a deceleration force as a function of the mass and one of (a) an uphill force and (b) a downhill force as a function of the gradient angle, wherein the mass is calculated from the equation of

$m = \frac{dF/dt}{da/dt}$, and a represents a time derivation of a longitudinal vehicle velocity and F represents the motive force of the vehicle, wherein the measured quantities are available in a control unit of the vehicle.

30. (New) The method according to claim 13, wherein the computer-aided differentiating is performed continuously and recursively, wherein the computer-aided differentiating is performed one of (a) according to a two-point differentiation and (b) with a state-variable filter, and wherein the calculating includes calculating the mass and a reciprocal value of the mass.